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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,878	04/01/2005	Yukiro Kashima	2005_0573A	5373

52349 7590 09/10/2007

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EXAMINER	
GUZMAN, APRIL S	
ART UNIT	**PAPER NUMBER**
2618	

MAIL DATE	DELIVERY MODE
09/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,878	KASHIMA ET AL.	
	Examiner	Art Unit	
	April S. Guzman	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/1/05,10/24/06,3/27/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/27/2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito et al. (U.S. Patent Application Publication # 2002/0034966 A1)** in view of **Bakker et al. (U.S. Patent # 6,720,927)**.

Consider **claim 5**, Saito et al. teach a terminal device for connecting to a wireless network, the terminal device comprising:

a housing (body (14) having a front panel including a slot (PC card slot 17) therein for receiving a wireless module (wireless PC communications card 10) including a transmission and reception antenna (transmitting and receiving circuit), the transmission and reception antenna being located outside of the housing when the wireless module is received in the slot (antenna housing 11B sticking out of the body 14 when inserted detachably into the personal computer 16) (Figure 4, Figure 9, Figure 11, [0045]-[0048], and [0082]-[0083]);

a first antenna (first inverted-F type flat-plate antenna 33) unit for connection to the transmission and reception antenna physically or spatially (Figure 11, Figure 2, and [0084]-[0088]);

a second antenna unit (first inverted-F type flat-plate antenna 34) connected to the first antenna unit, the second antenna unit for transmitting and receiving radio signals directly to and from the wireless network (first inverted-F type flat-plate antenna 33 is electrically connected to a feeder conductor 33C which is electrically connected to card-side grounding conductor 32 and

second inverted-F type flat-plate antenna 34 is placed symmetrically to the first inverted-F type flat-plate antenna 33 which is electrically connected to a feeder conductor 34 C that is electrically connected to the card-side grounding conductor 32 therefore first and second inverted-F type flat-plate antennas 33, 34 are electrically connected) (Figure 11, Figure 12, and [0084]-[0088]); and

a cover (card case 11 comprising a circuit board 31, an insertion part 11A and an antenna housing part 11B) for accommodating the transmission and reception antenna when the wireless module is received in the slot, the first antenna unit, and the second antenna unit (first and second inverted-F type flat-plate antennas 33, 34 are installed in card case 11), the cover being attached to the front panel of the housing (insertion part 11A can be inserted into PC card slot 17 of a personal computer 16) (Figure 4, Figure 11, [0046], and [0082]-[0084]).

However, Saito et al. fail to teach the second antenna unit connected to the first antenna unit so as to be connected to the transmission and reception antenna via the first antenna unit.

In the related art, Bakker et al. teach the second antenna unit connected to the first antenna unit so as to be connected to the transmission and reception antenna via the first antenna unit (column 2 lines 18-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Bakker et al. into the teachings of Saito et al. for the purpose of providing beneficial radiation characteristics.

Consider **claim 6, as applied to claim 5 above**, Saito et al. as modified by Bakker et al. further teach further comprising a high-frequency amplifier circuit having a gain of one or more,

the high-frequency amplifier circuit being located between the first and second antenna units (Saito et al. - Figure 13B, Figure 13C, and [0094]-[0095]).

Consider **claim 7**, Saito et al. teach a terminal device (personal computer 16) for connecting to a wireless network (other wireless PC communications card 10), the terminal device comprising (Figure 4, Figure 5, Figure 7, Figure 9, Figure 11, [0045]-[0048], and [0056]):

a housing (body (14) including a slot (PC card slot 17) therein (Figure 4, Figure 9, Figure 11, [0045]-[0048], and [0082]-[0083]);

a wireless module (wireless PC communications card 10) including a transmission and reception antenna (transmitting and receiving circuit), the wireless module passing through the slot whereby the transmission and reception antenna is located outside of the housing (antenna housing 11B sticking out of the body 14 when inserted detachably into the personal computer 16) (Figure 4, Figure 9, Figure 11, [0045]-[0048], and [0082]-[0083]);

a first antenna unit (first inverted-F type flat-plate antenna 33) physically or spatially connected to the transmission and reception antenna (Figure 11, Figure 2, and [0084]-[0088]);

a second antenna unit (first inverted-F type flat-plate antenna 34) connected to the first antenna unit, the second antenna unit for transmission and receiving radio signals directly to and from the wireless network (first inverted-F type flat-plate antenna 33 is electrically connected to a feeder conductor 33C which is electrically connected to card-side grounding conductor 32 and second inverted-F type flat-plate antenna 34 is placed symmetrically to the first inverted-F type flat-plate antenna 33 which is electrically connected to a feeder conductor 34 C that is electrically connected to the card-side grounding conductor 32 therefore first and second

inverted-F type flat-plate antennas 33, 34 are electrically connected) (Figure 11, Figure 12, and [0084]-[0088]); and

a cover (card case 11 comprising a circuit board 31, an insertion part 11A and an antenna housing part 11B) accommodating the transmission and reception antenna, the first antenna unit, and the second antenna unit (first and second inverted-F type flat-plate antennas 33, 34 are installed in card case 11), the cover being attached to the housing (insertion part 11A can be inserted into PC card slot 17 of a personal computer 16) (Figure 4, Figure 11, [0046], and [0082]-[0084]).

However, Saito et al. fail to teach the second antenna unit connected to the first antenna so as to be connected to the transmission and reception antenna via the first antenna unit.

In the related art, Bakker et al. teach the second antenna unit connected to the first antenna so as to be connected to the transmission and reception antenna via the first antenna unit (column 2 lines 18-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Bakker et al. into the teachings of Saito et al. for the purpose of providing beneficial radiation characteristics.

Consider **claim 8, as applied to claim 7 above**, Saito et al. as modified by Bakker et al. further teach further comprising a high-frequency amplifier circuit having a gain of one or more, the high-frequency amplifier circuit being located between the first and second antenna units (Saito et al. - Figure 13B, Figure 13C, and [0094]-[0095]).

Consider **claim 9, as applied to claim 5 above**, Saito et al. as modified by Bakker et al. further teach wherein only the second antenna unit is operable to transmit and receive the radio

signals to and from the wireless network (Saito et al. – [0087]-[0089], [0092], and [0106]-[0107]; Bakker et al. – column 2 lines 18-53).

Consider **claim 10, as applied to claim 7 above**, Saito et al. as modified by Bakker et al. further teach wherein only the second antenna unit is operable to transmit and receive the radio signals to and from the wireless network (Saito et al. – [0087]-[0089], [0092], and [0106]-[0107]; Bakker et al. – column 2 lines 18-53).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of Reference Cited.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April S. Guzman
A.S.G/asg

09/03/07

9-04-07

LANA LE
PRIMARY EXAMINER